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ABSTRACT

The report discusses outcomes assessment plans for Connecticut community colleges. It presents a variety of tools for use in assessing course, program, and general education goals. Demonstrations of competence, measures of quality, and justifications of costs have become essential components of institutional effectiveness. A good assessment plan plays a key role in integrating these components, engaging them in the ultimate goal of improving teaching and learning. Assessment plans can help answer important questions: How do programs meet student and community needs? How well do we achieve programs' goals? What evidence should we gather to answer these questions? How do we interpret this evidence? How do we use this information to enhance teaching and learning? Learning outcomes are statements of what a student is expected to be able to do as a result of successfully completing a course. General education outcomes should be stated in terms that tell directly and clearly what all learners fulfilling general education requirements should expect to accomplish. Methods of assessment that provide direct evidence of learning include the following: student work samples; collections of student work/portfolio; capstone projects; laboratory experiments; and course-embedded assessment. For using assessment to enhance learning, the key is understanding how variety is involved in learning. The guide contains Sample Question for Faculty and Staff Survey and Lists of Verbs for Articulating Measurable Outcomes. (Contains 30 references.) (JA)

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A Step by Step Guide to Outcomes Assessment in the Connecticut Community Colleges

prepared by

QUINEBAUG VALLEY COMMUNITY COLLEGE

Spring 2000

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A Step by Step Guide to Outcomes Assessment in the Connecticut Community Colleges

WHY SHOULD WE DO ASSESSMENT?

Higher education continues to face new challenges. Technological developments and dramatic changes in the global workplace call for adjustments in programs, instructional delivery, and resource allocation. Because of increased public scrutiny, high student and employer expectations, and quickly changing technology, we find that demonstrations of competence, measures of quality, and justifications of costs have become essential components of institutional effectiveness. A good assessment plan will play a key role in integrating these components, engaging them in the ultimate goal of improving teaching and learning.

Each institution of higher education has a mission statement. For community colleges, the mission statement usually includes several aspects. At a minimum, general education, career education, continuing education, and transfer to four-year programs are aspects of the missions of community colleges. Each institution should approach assessment in these areas in the context of being responsive to community needs.

Consistent with a college's mission, programs are created, curriculum is designed, and educational objectives are set, prompting key questions. How do programs meet student and community needs? How well do we achieve programs' goals? What evidence should we gather to answer these questions? How do we interpret this evidence? How do we use this information to enhance teaching and learning?

A solid assessment plan should help us answer such questions. In addition, it should provide us the information necessary to make effective decisions about technology, support services, methods of delivery, co-curricular activities, library resources, curricular revision, and faculty development and scholarship. In time, the answers should provide the basis for revising a college's mission and its educational objectives at various levels.

While the term "outcomes assessment" appears to refer to an end, assessment should be seen as a means, with the primary emphasis falling on continued improvement of student learning. In addition to demonstrating accountability for accreditation purposes, assessment should result in useful information, leading to stronger programs and better teaching. It should revitalize the faculty, provide stimulation throughout the institution, and enhance collegiality. It should improve communication across campus and lead to better administrative decisions. Indeed, administrative and fiscal decisions call for more assessment than ever—for example, as more technology becomes available, it is imperative to gauge the effectiveness and efficiency of alternative options.

Externally, assessment should provide information to improve graduate placement and better meet marketing needs. This should enhance public relations with local employers

and contribute to increased public funding and private support. For community colleges in particular, assessment is a tool for weaving their missions into their communities, for negotiating change, and for effecting change as well.

In 1997, the Commission on Institutions of Higher Education of the New England Association of Schools and Colleges (NEASC) initiated the *Student Outcomes Assessment Initiative*:

> The Commission expects each institution, as a means of its dedication to institutional improvement, to monitor its effectiveness in achieving its mission and purposes. Accordingly, the institution collects and analyzes relevant data and uses this information in the institutional planning process as a basis for sustaining quality and self-improvement. Thus, assessment functions as a tool for the encouragement of such improvement as well as a basis for quality assurance.

The NEASC *Standards for Planning and Evaluation* states:

- The institution evaluates the achievement of its mission and purposes, giving primary focus to the realization of its educational objectives. Its evaluative procedures are appropriate and effective for addressing its unique circumstances. To the extent possible, evaluation enables the institution to demonstrate through verifiable means its attainment of purposes and objectives both inside and outside the classroom.
- The institution systematically applies information obtained through its evaluation activities to inform institutional planning, thereby enhancing institutional effectiveness especially as it relates to student achievement.

WHAT SHOULD WE DO FIRST?

The design and implementation of a comprehensive outcomes assessment program should not involve anything particularly difficult or complex, but it will require a serious commitment of time and energy from the entire college community. The first step in organizing an assessment program should be the formation of a small task force, which will take responsibility for overseeing the development and implementation of the program. This group should include the chief academic officer plus faculty members and program directors that have indicated an interest in assessment.

- First, the task force should work to create, within the college, an attitude that welcomes the establishment of an assessment program, while determining what assessment projects are already in place.
- Second, the task force should organize a series of discussion groups to review existing practices and determine what the college will assess.
- Third, the task force should establish working groups, which will actually complete the design of the plan.

When presenting the idea of outcomes assessment to the college community, we should take care that it is not presented as a "make work project required by some outside authority." The chief academic officer should take the lead in explaining the value that

the institution will gain by having a college-wide systematic approach to assessment. When discussing the value of assessment, we should focus on how it improves our understanding of the ways students learn, how it provides clear information about the college for students and other stakeholders, how it helps us make improvements to courses and programs, and how it assists the college community in focusing on what the institution is broadly trying to accomplish. Help in expressing these factors may be found in the experiences of other schools—for example, in Palomar College's *Statement of Principles on Assessment* or Purdue University-Calumet's *Assessment Philosophy and Purpose*—or through centers that link groups of colleges, such as the Washington Center for Improving Undergraduate Education (see the reference list at the end of this document).

While the college community is being informed about the value that can be derived from a comprehensive assessment program, the task force members should complete a survey of all faculty and staff members to develop a reference list of assessment activities that are currently in place (a set of sample questions is appended at the end of this document). This can best be accomplished by a personal interview with each individual; also, interviews provide an excellent opportunity to engage colleagues in discussion about the value of the project. In larger institutions, it might seem necessary to conduct a survey in writing, but the time saved would not be worth losing the opportunity to bring the word about assessment to each individual. Task force members will typically find that there is already an array of assessment activities being done on the campus. Activities might include course level assessment—such as classroom assessment activities like those recommended by Cross and Angelo—portfolio evaluation, course completion rates, and analyses of course grades. On the degree program level, there should be even more efforts already in place; these might include skills certification and employment surveys. There may be activities in place to measure the success of students who are enrolled in groups of courses such as English as a Second Language or developmental course work. One area where typically there is no ongoing assessment is the fulfillment of general education goals. In any case, the assessment activities already in place should provide a basis upon which a complete and comprehensive assessment program can be constructed.

Once there has been some acceptance of the project by faculty and staff and the survey of assessment activities currently in place has been compiled, it will be time to actually begin the outcomes assessment project. It will be necessary to organize a series of meetings where all interested parties will have the opportunity to express opinions about what should be assessed. The areas selected for assessment will provide a blueprint for the implementation of the outcomes assessment program. Once the areas to be assessed have been selected, the task force can construct a time line for implementation, realizing that it would be unproductive to try to implement the entire program at one time. In order to move forward and include a wide group of people in the development of the program, the task force should select working groups to focus on component projects. This will be particularly important if the community chooses to focus first on the assessment of individual courses, since every course will have to receive the attention of one of the working groups.

HOW DO WE DEVELOP COURSE OUTCOMES?

As an assessment process is carried out, all parties should be aware of the contents of the college mission statement. Thus the process may begin with a revision of that statement. Program and general education learning goals will need to be linked to the mission statement. Yet, for working out the intricacies of a complete outcomes assessment project, a more natural starting point is the development of learning outcomes for each course offered by the institution.

Learning outcomes are statements of what a student is expected to be able to do as a result of successfully completing a course. These outcomes relate to what the student will do, not what the instructor does. Within the *Standards for Accreditation*, NEASC—under Standard Four, Programs and Instruction, 4.3 and 4.7—calls for an indication of knowledge, understanding, and competencies that characterize outcome statements. Here is an example outcome: "The student can locate appropriate information for a research paper using both electronic and traditional media."

Here are four questions developed by Trudy Banta in *Assessment in Community Colleges* as a guide for generating outcome statements:

1. What general outcome are you seeking?
2. How would you know it (the outcome) if you saw it? OR What will the student know or be able to do?
3. How will you help the student learn it?
4. How could you measure each of the desired behaviors listed in #2?

Learning outcomes for courses should have some hierarchy or taxonomy of learning as their foundation. One commonly used is Bloom's taxonomy, which consists of six levels of ascending complexity within the cognitive domain:

- Knowledge
- Comprehension
- Application
- Analysis
- Synthesis
- Evaluation

Other taxonomies include one of the affective domain developed by David Krathwohl, a scale of intellectual development of college students by William G. Perry, and one by Mary Field Belenky titled *Women's Ways of Knowing* (see the reference list at the end of this document).

Learning outcomes are written using active verbs. They address major outcomes, as opposed to very specific single class session outcomes. They are also written in a way

that makes it possible to assess student success in attaining the outcome. They should NOT:

- State outcomes in terms of instructional method; for example:
  "Teach students to write a persuasive essay."
  The focus here is the teacher and a particular instructional method, rather than student behavior.
- Be overly general; for example:
  "Students learn methods of research."
  To assess this outcome, one would need to specify methods of research and thus would write more specific outcomes.
- Describe course content; for example:
  "Students study the invention of the automobile."
  How do we know the students have studied? More importantly, what do we want them to know as a result? This statement describes specific content rather than intended outcome.

Two lists of verbs (concerning specific skills and general education) for possible use in constructing outcomes are appended at the end of this document.

As we develop course outcomes, we should consider this advice from Banta's *Assessment in Practice: Putting Principles to Work on College Campuses*: "Assessment requires attention to outcomes but also and equally to the experiences that lead to those outcomes. We must pay attention to the processes of teaching and curriculum construction in order to increase and enhance student learning and then measure the outcomes. Only if we connect the processes and outcomes will we know what to improve when the results of assessment become available."

HOW DO WE DEVELOP GENERAL EDUCATION OUTCOMES?

The core values and goals of general education are at the very heart of our colleges' reason for being. Such values and goals broadly express what we expect students to be able to do and to become as they pursue education through our courses, programs, and degrees. Thus, assessing general education outcomes is now new, but reflects tradition and history at least as much as it reflects the challenges of a changing world.

As outcomes are developed for particular courses, linkages become clear between course outcomes and those concerning general education and degree and certificate programs. The assessment process leads to considerations of how students attain what the general education goals say they attain. For example, assessing general education can involve identifying which required courses support which specific outcomes of general education.

There are various sources for the development of a coherent and integral statement of general education outcomes. These include:

- Learners themselves, and what they will need from education in order to participate effectively in, and to contribute significantly to, their world

- Practitioners (educators and administrators), who bring professional experience and expertise to the process of clarifying a common set of general education outcomes
- The tradition of higher education, with its general definition of "an educated person" as this definition already has been institutionalized in our colleges (including existing statements of general education goals at specific institutions)
- Practical examples from institutions that have already clarified their general education outcomes
- The statement of standards for general education as specified by an accrediting agency, such as NEASC.

To develop an effective and coherent set of general education outcomes, input should be drawn from a representative cross-section of the college community, to be sure that the outcomes belong to everyone. Depending on the size of a college, this may be a relatively large portion of the community of faculty, staff, students, and administration, or it may be a smaller working group that elicits input from the wider institution.

The outcomes should be stated in terms that tell directly and clearly what all learners fulfilling general education requirements should expect to accomplish. For some colleges, this may be a departure from earlier statements of goals that speak more in terms of what the college and its programs will do, rather than what students should learn (or learn to do).

The task should not occur in a vacuum or be done from scratch; many colleges have already developed effective statements of general education goals. The following is a list of practical resources:

- The statement of NEASC standards for general education (particularly as explained in standards 4.14, 4.15, 4.16 and 4.19)
- Existing college statements of general education goals and objectives (at one's own and related colleges)
- Online statements of college general education goals and assessment projects, a few examples of which are listed at the end of this document (which are not necessarily representative of "the best," but presented mainly as a starting point for further analysis and comparison).
- Lists of active verbs that help specify how skills and knowledge students learn in courses and programs apply to general education goals (see the list appended at the end of this document).

Also, it maybe useful to examine the core general education curriculum being developed by Norwalk Community College as part of the Connecticut Community Colleges' Academic Models program.

Once a college has developed its statement of general education outcomes, the statement becomes a public expression of standards and ongoing commitment. It becomes part of

the "contract" with the community, to which further levels of course, program, and degree assessment will contribute. The college community can then continue to define and refine its ongoing "culture of assessment" at each of these levels, from the classroom to the structures and functions of the wider institution.

HOW DO WE DEVELOP PROGRAM AND DISCIPLINE OUTCOMES?

Program and discipline learning outcomes define what we expect graduates of programs and disciplines to know and be able to do. Therefore, we must carefully consider what knowledge, experiences, skills, and values students will acquire by successfully completing a program. These learning outcomes should describe significant intended results of instruction, so program outcomes need to be closely integrated with the stated outcomes of relevant courses. Such outcomes should be integral to the way programs are conceived, and thus they should be integral to any area self-study project. For more on area outcomes, see relevant materials prepared by various colleges for the Connecticut Community Colleges' Academic Models project—for example, on program development and review (Gateway), program guarantees (Middlesex), and student goal attainment (Tunxis). A link to the CCC Academic Models is listed among the references at the end of this document.

It is important that what is assessed is stated as clearly and as specifically as possible. Thus, when writing program/discipline outcomes:

- Use language that can be easily understood by all.
- Make learning outcomes clear and achievable.
- Use active verbs, such as those listed at the end of this document.
- Keep in mind the institution's mission, goals, and objectives.

EXAMPLE: Associate's Degree in Computer Science

- Outcome #1: Students graduating from the Computer Science Degree Program will demonstrate the ability to install, configure, troubleshoot, and maintain microcomputers and peripheral devices.
  This outcome relates to the application of knowledge. To determine whether students have achieved the outcome, various assessment methods can be employed: pre- and post-tests, unit specific tests, and/or course-embedded assessment.
- Outcome #2: Students graduating from the Computer Science Degree Program will demonstrate the ability to interpret, analyze, and solve problems using a computer.
  This outcome also relates to the application of knowledge. Possible assessment methods are student papers, portfolios, oral presentations, embedded test questions, and/or a capstone project.
- Outcome #3: Students graduating from the Computer Science Degree Program will learn terms, facts, concepts, and theories of the discipline.
  This outcome is not stated in specific terms and as such would be difficult to measure.

It would be better to state the outcome in terms of things students will be able to show that they have learned.

The following questions will aid in the writing of specific and measurable learning outcomes:

- What specific end results should students be able to exhibit?
- How will they be measured?

California State University offers extensive examples of learning outcomes for academic degree programs (see the reference list at the end of this document).

HOW DO WE ASSESS OUTCOMES?

It would be helpful for getting started if a cookbook of proven "recipes" for assessment were available. But because assessment should be developed organically in each institution, what is presented here is a variety of tools for use in assessing course, program, and general education goals. The tools are generic and come without directions for use; they await users' selection and manipulation to suit particular assessment contexts. The following lists of assessment methods—and for comparison, lists of methods that do not assess learning—are influenced by Peggy Maki's NEASC workshop on assessment.

Methods of assessment that provide direct evidence of learning

- Student work samples
- Collections of student work/portfolios
    - Process portfolios
        - Practice in the skill of revising
        - Autobiographical reflective papers
        - Philosophical statements
    - Program portfolios
        - Documentation/collection of important work used by group/department for evaluation purposes and funding requests
    - Presentation portfolios
        - Resumes
        - Collections of important work
        - Philosophical statements
- Capstone projects
- Laboratory experiments
- Course-embedded assessment, including locally developed tests, research papers, exams, reflective essays
- Presentations
- Panel discussions
- Performance in the fine arts and/or languages
- Senior seminars and/or projects
- Observations of student behavior

- Internal juried review of student projects
- External juried review of student projects
- Internships (internally and/or externally reviewed)
- Performance on a case study/problem
- Performance on national licensure examinations
- Standardized tests
- Pre- and post-tests
- Essay tests blind scored across units

Methods of assessment that provide indirect evidence of learning

- Alumni, employer, student surveys
- Focus groups
- Exit interviews with graduates
- Graduate follow-up studies
- Percentages of students who transfer
- Retention studies
- Job placement statistics

Methods of assessment that do not provide evidence of learning

- Enrollment trends
- Patterns of how courses are selected or elected by students
- Faculty to student ratios
- Percentage of students who graduate within a certain period of time
- Diversity of the student body
- Percentage of students who study abroad
- Size of the endowment
- Faculty publications (unless students are involved)

The task for an institution is to develop its own iterative and progressively fine-tuned process of assessment. That is, assessment tools should feed back to influence decisions made by faculty, staff, and administrators concerning various aspects of students' learning experience and students' preparedness to meet their personal, practical, and professional needs. The feedback will involve a multi-dimensional comparison between what is expected of students and how they perform at the course, program, and general education levels.

NEASC standard 2.4 states that institutions must evaluate, through verifiable means, their attainment of purposes and objectives inside and outside the classroom. In its *Policy Statement on Institutional Effectiveness*, NEASC's Commission on Institutions of Higher Education emphasizes other key points:

- There is no one best way to assess institutional effectiveness and the Commission prescribes no formula that an institution must use for measuring or demonstrating its effectiveness. Assessment efforts will vary [and be] compatible with the institution's mission and its available resources.
- Assessment is evolutionary, ongoing, and incremental.

- An institution initially engaging in assessment will be likely to do so on a limited basis. However, . . . in due course its assessment efforts will be more comprehensive, systematic, integrative, and organic.
- Regardless of their scope, these efforts will be both qualitative and quantitative [and will] not require standardized or even professionally developed instruments or complicated methods of statistical analysis.

Thus, NEASC directs us to connect the assessment efforts of various institutional levels and invites us to take ownership of assessment in a variety of ways that allow for the development of assessment strategies and expertise over time. Furthermore, the American Association for Higher Education provides the following descriptions of assessment:

- Assessment reflects an understanding of learning as multi-dimensional, integrated, and revealed in performance over time. Specifically, implementation of assessment should include " a diverse array of methods, including those that call for actual performance, using them over time so as to reveal change, growth, and increasing degrees of integration."
- Assessment efforts attend to both outcomes and "the experiences that lead to those outcomes" in order to "understand which students learn best under what conditions." Robert Sternberg, Howard Gardner, and others detail the multiple intelligences that students bring to bear on learning. Assessment tools and techniques that help educators understand multiple intelligences and thereby assist us in structuring improved, varied learning environments.

HOW CAN WE USE ASSESSMENT TO ENHANCE LEARNING?

Traditionally, assessing students' learning has involved calculating grades that, ideally, express students' facility with course matter. Such assessments give a sense of what a student can do and what he or she is ready to build on. Also, expressions of assessment regularly aid in curricular and course development, as assessment is intimately involved with assumptions about the content of courses and how students engage that content. Since courses have stated objectives, and students' abilities to meet those objectives are measured, the measurements become involved not only in an instructor's grade calculations but also in his or her reflections on how conducting a course can affect the students' success. To the extent that such reflections are put into practice, assessment plays a role in enhancing learning. Using assessment to affect course conduct and development is making use of the "assessment loop."

Since assessment takes place at many levels, not just in semester grades, opportunities for using assessment to enhance learning emerge in various contexts. Specific assignments are assessed during a semester, and even in individual class periods instructors commonly evaluate how well students learn—such as by considering class discussion or responses to questions—and often, instructors make on-the-spot adjustments. Assessments made beyond the classroom (as in measuring a student's ability to apply materials in subsequent courses or in employment situations) can be reflected in a course. Thus,

assessments of students' success at various levels can be brought to bear on a course's content and presentation, so as to enhance the learning that takes place in the course.

The current thrust of assessment is toward variety; for using assessment to enhance learning, the key is understanding how variety is involved in learning. Functioning in a feedback loop, assessment leads to analysis of not just what but how students learn—for instance, how individuals learn in comparison with each other. The more aware an instructor is of the various ways students learn, the better sense she or he has of students' handling of the materials and methods of courses. And normally, assessment devices turn out to be multifaceted themselves. An exam—to use a typical example—may measure a student's grasp of material and therefore his or her ability to make use of that material, but it may also measure the student's ability to take exams, in which case assessed limitations on the part of the student may not be his or her limitations with the material. Insofar as the exam does reflect a grasp of material, the limitations of that grasp may indicate a number of factors—not necessarily the student's ability to grasp the material, but perhaps limitations imposed by the instructional context, limitations that could be overcome by changing textbooks, perhaps, or methods of presentation. So using assessment to enhance learning tends to be an ongoing project, in which assessment devices are themselves assessed and there is regular reflection on what constitutes useful data.

Using assessment as feedback may be relatively simple at times, such as when a particular course objective requires students simply to memorize material. But students in many courses acquire and demonstrate skills or techniques—often involving critical thinking or metacognitive activity—making the feedback loop tricky to negotiate. For example, in an English course, one instructor began assessing the specific critical skills that students demonstrated in certain writing assignments, including the synthesis, organization, and application of ideas. She noticed that over several semesters, her students had seemed to become more and more adept at all these aspects in a paper that required the application of theoretical ideas to a set of cases. But she was troubled to see that over the same period, students were having more and more difficulty with all aspects of the research paper that followed the application assignment and which provided the final and major assessment of the students' writing for the semester. Her assessment of the application papers' organization showed that students in recent classes tended to organize their papers similarly, whereas papers from earlier semesters had tended to be organized in different ways, regardless of what she had perceived to be the quality of the writing. She realized that across the semesters, she had been gradually providing more information on how to organize the application assignment, so students were following the instructions in a rote manner, not learning how to discover ways of organizing ideas. Prior to developing a practice of assessing specific skills, she had been privileging organization and tending to neglect problems in application and synthesis. Students each semester were finding the application paper easier to write, while they were less challenged, not engaging the assignment creatively and thus not having the chance to develop adequately all three skills. So the more recent students were not as well prepared to use these skills for the research paper as the students of earlier terms were. The instructor's assessment practice identified where she was excessively directing the

students and depriving them of a process of discovery that was necessary for them to experience before tackling the major, final assignment. She was able to enhance her students' learning in the course by limiting the amount of direction given to them on the application assignment.

NEASC's *Policy Statement on Institutional Effectiveness* articulates the kind of "formative" or in-process use of assessment that has been discussed here: "Assessment is not a one-time activity; rather, it is evolutionary, ongoing, and incremental." NEASC also emphasizes the improvisational and often informal nature of formative assessment—its use as a largely habitual part of reflection on the processes of teaching and learning.

Using assessment to enhance learning at the level of certificate or degree programs is more complex than using it in the context of specific courses, although the concept remains the same. Whereas in particular courses, the single course's objectives are at issue, program objectives need to be met by courses and other requirements that students might fulfill to attain the particular certificate or degree. And concerning the level of the institution, the relationship between assessment and learning entails considering the institution's expressed goals while deciding which course or program goals are to be assessed and enhanced. Yet at any level, the practice of assessment should not lead to standardized syllabi; in fact, ongoing assessment argues for multiple teaching approaches as it does for multiple learning styles, because objectives are recognized as attainable in various ways. Barbara Wright of NEASC recommends that assessment at all levels be "flexible and pragmatic"; there are no specific NEASC standards for using assessment to enhance learning, because flexibility is particularly important in this use of assessment. Rather, NEASC presents general suggestions on ways of using assessment to affect teaching and learning. According to Peggy Maki, such strategies include the following:

- Revising teaching strategies to improve student achievement
- Revising course content to assure appropriate attention to areas that need increased attention
- Replacing or revising courses, programs, services
- Changing sequence of courses
- Adding a requirement or required course
- Enhancing the advising process
- Increasing focus throughout the curriculum
- Increasing support services

Besides NEASC, there exist various resources for using assessment to enhance learning. On the topic of classroom assessment, probably the most popular are materials by Cross and Angelo. Also useful is Huba and Freed's *Learner-Centered Assessment on College Campuses: Shifting the Focus from Teaching to Learning*. The Center for Teaching Excellence has provided each of the Connecticut Community Colleges with materials on using classroom feedback to enhance teaching and learning, derived both from within and

without the CCC system. Bill Searle of Asnuntuck Community College is the main contact for these materials (he can be reached at <as_bills@commnet.edu>). At the end of the fall 1999 semester, each campus received a manual on assessment that was developed by the National Council for Staff, Program, and Organizational Development. Finally—as examples in the above paragraphs suggest—it is important to note that assessment techniques can be highly discipline-specific; much of the best material on using assessment to enhance learning is available from sources particular to individual disciplines.

SAMPLE QUESTIONS FOR FACULTY AND STAFF SURVEY

Below are five questions that might be used in the collection of information about outcomes assessment activities that are currently in place at an institution. Different faculty and staff members, depending on position, will be able to respond to different questions—some to only one, perhaps, although some may have responses to all five. The questions are designed to determine the types of assessment activities in place, rather than gathering data from activities: this should be made clear to the respondents.

1. Program Evaluation: As a program coordinator, what methods do you use to evaluate the quality of your program?

2. Academic Area Evaluation: What methods have been used or are being used to evaluate the quality of course offerings in your academic area?

3. Individual Course Evaluation: What activities do you use to monitor the quality of individual courses that you teach?

4. General Interest Evaluations of Programs and/or Courses: What activities have you undertaken that are (or that could be) used to evaluate courses and/or programs offered to students? (This would apply to any activities that would not fit under the heading of program evaluation or academic area evaluation and which also are not limited to particular courses.)

5. Evaluation of Services Offered outside the Classroom: What activities do you use to monitor the value and quality of programs and/or services that you provide to students?

LISTS OF VERBS FOR ARTICULATING MEASURABLE OUTCOMES

These lists were assembled by Dr. Dorothy Bowen from lists presented by Calvin Claus at the annual meeting of the National Council on Measurement in Education in Chicago, February 1968.

List 1: Specific Skills

Creative behaviors

alter	generalize	question	reorganize	revise
ask	modify	rearrange	reorder	rewrite
attempt	open	recombine	rephrase	simplify
begin	paraphrase	reconstruct	restate	synthesize
change	position	regroup	restructure	systematize
design	predict	rename	retell	vary

Complex, logical, judgmental behaviors

analyze	contrast	determine	fit	plan
appraise	criticize	evaluate	formulate	present
combine	decide	expand	generate	relate
compare	deduce	explain	induce	structure
conclude	defend	finish	infer	substitute

General discriminative behaviors indicating critical thinking

choose	designate	identify	omit	point
collect	detect	indicate	order	position
complete	differentiate	isolate	pick	select
define	discriminate	list	produce	separate
describe	distinguish	match	place	

Language behaviors

attempt	capitalize	print	say	tell
abbreviate	complete	pronounce	sign	translate
accent	edit	present	speak	type
alphabetize	hyphenate	punctuate	spell	verbalize
articulate	indent	produce	state	whisper
begin	open	read	summarize	write
call	outline	recite	syllabify	

"Study" behaviors

attempt	circle	follow	mark	reproduce
attend	compile	itemize	name	search
arrange	complete	label	note	sort
bring	copy	locate	organize	underline
categorize	diagram	look	quote	watch
chart	find	map	record	work

List 2: General Education Goals

To develop active self motivated learners

adapt	contribute	form	obtain	question
aim	deal	generate	organize	react
analyze	define	group	participate	reflect
apply	develop	help	perceive	stimulate
change	discriminate	improve	produce	translate
communicate	explain	interact	propose	try
compare	find	investigate	prove	use
construct	focus	make	provide	

To develop students' ability to be self-reflecting, analytical, and questioning about the world and their place in it

analyze	contribute	focus	join	review
arrange	cooperate	identify	perceive	search
assess	defend	interact	permit	sort
associate	define	interpret	question	suggest
attribute	devise	investigate	recognize	translate
comment	find	involve	respond	understand

To develop students' awareness of the dynamics of race, class, and gender in a contemporary society

accept	choose	define	measure	select
agree	comment	enrich	participate	separate
aid	communicate	feel	perceive	suggest
alter	compare	help	question	support
appraise	consider	interact	react	surmise
argue	contribute	investigate	recognize	talk
assess	correct	involve	research	translate
change	criticize	listen	respond	understand

To expose students to world culture

accept	change	formulate	praise	research
agree	compare	investigate	question	select
alter	criticize	involve	react	suggest
argue	define	listen	recognize	support
assess	feel	participate	relate	understand

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